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| 09/961,125 | 09/21/2001 | Ciaran Gerard O'Donnell | US 018157 | 4203 |

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EXAMINER

THAI, XUAN MARIAN

| ART UNIT | PAPER NUMBER |
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2111

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/961,125

Applicant(s)

O'DONNELL, CIARAN GERARD

Examiner

XUAN M. THAI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Drehmel et al. (USPN 6,557,069; Drehmel).

As per claims 1 and 2, Drehmel discloses the claimed invention including a home control platform comprising: a plurality of serial buses (e.g. PCI bus; col. 5, line 52) that is configured to provide interconnections among a plurality of processing units (e.g. I/O processing units 111-117 or processors 101), a bus allocation control unit (ASW 212 and data switch unit 211- DSW) that is configured to receive requests for bandwidth allocation from the plurality of processing units, and to provide allocations of subsets of the plurality of serial buses to satisfy the requests (col. 11, lines 15-61).

3. Claims 1-4, 8-19, 21, and 25-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Zou (USPN 6,160,796).

As per claims 1 and 2, Zou discloses the claimed invention including a home control platform comprising: a plurality of serial buses (1394 bus 30a-f) that is configured to provide interconnections among a plurality of processing units (12, 14, 16, 18, 20, 22, 24), a bus allocation control unit (CMM 250) that is configured to receive requests for bandwidth allocation

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from the plurality of processing units, and to provide allocations of subsets of the plurality of serial buses to satisfy the requests (col. 9, lines 45-64).

As per claim 3, Zou discloses the home control platform of claim 2, wherein the at least one processing unit includes at least one of: an MPEG decoder, an MPEG encoder a signal processor, a variable-length decoder, a variable-length encoder, a coder-decoder, a video CODEC, an audio CODEC, a Fast-Fourier-Transform device, a Discrete-Cosine-Transform device, a video processor, and an audio processor (e.g. fig. 1; fig. 2; col. 2, lines 60-65).

As per claim 4, Zou discloses the home control platform of claim 2, wherein the at least one processing unit includes at least one of: a serial-to-parallel converter, a parallel-to-serial converter, a bus arbitrator, a bus router, and a direct-memory-access device (e.g. fig. 2; fig. 4; fig. 5A, 5B)

As per claim 8, Zou further discloses at least one control processor (DCM) that is configured to provide control of data transfer among the plurality of processing units (col. 7, lines 5-8).

As per claim 9, Zou discloses the home control platform of claim 8, wherein the at least one control processor includes at least one of: a network interface, a network manager, a browser, and a user interface (col. 8, lines 30-31).

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As per claim 10, Zou discloses the home control platform of claim 9, wherein the at least one control processor includes at least one of: a serial-to-parallel converter, a parallel-to-serial converter, a bus arbitrator, a bus router, a protocol stack, and a direct-memory-access device (col. 9, lines 1-10).

As per claim 11, Zou discloses the home control platform of claim 8, wherein the at least one control processor includes: a bus interface unit (fig. 2), operably coupled to the plurality of serial buses, that is configured to effect transfer of data via the plurality of serial buses, and a central processing unit (101), operably coupled to the bus interface unit, that is configured to process input data from the bus interface unit, and is configured to provide processed data to the bus interface unit (col. 8, lines 15-34).

As per claim 12, Zou discloses the home control platform of claim 11, wherein the at least one control processor further includes an SDRAM (memory; fig. 2).

As per claim 13, Zou discloses the home control platform of claim 8, wherein the at least one control processor further includes a microkernel that is configured to provide base operating system services that include at least one of: semaphores, messaging, scheduling, exception management, task management, and memory management (col. 9, lines 5-67).

As per claim 14, Zou discloses the home control platform of claim 13, wherein the at least one control processor further includes an interface that is configured to couple the microkernel to a standard operating system (col. 12, lines 1 et seq.; fig. 3; fig. 8).

As per claim 15, Zou discloses the home control platform of claim 14, wherein the standard operating system includes one of: Vxworks, WinCE, and LINUX (col. 8, lines 31 et seq.).

As per claim 16, Zou discloses the home control platform of claim 13, wherein the task management is configured to provide direct access to at least one of the plurality of processing units, the at least one of the plurality of processing units being configured as a coprocessor, and the direct access being provided through a coprocessor interface layer (col. 8, lines 1-67).

As per claim 17, Zou discloses the home control platform of claim 8, wherein the at least one control processor is further configured to provide at least one of: task memory and CPU space isolation, virus protection, and money management (col. 8, lines 15-29).

As per claim 18, Zou discloses the home control platform of claim 8, wherein the at least one control processor is further configured to provide an interface between the home control platform and at least one legacy consumer product, the at least one legacy consumer product includes at least one of: a television, a telephone, an audio system, a video system, and an appliance (fig. 1A).

As per claim 19, Zou discloses the home control platform of claim 8, wherein the at least one control processor includes at least one of: a voice recognition system, a voice synthesis system, and a wireless device interface system (e.g. CD system; fig. 1A).

As per claim 21, Zou discloses the home control platform of claim 1, further including a power supply that is configured to provide power to one or more of the plurality of processing units in that power supply are inherent in each system in order for the devices to function.

As per claim 25, Zou discloses a control processor (e.g. top-set-box) for use in a home control platform, comprising: a bus interface unit, operably coupled to a plurality of serial buses of the home control platform, that is configured to effect transfer of data via the plurality of serial buses (1394; 30a-f), based on an allocation of a select one or more buses of the plurality of serial buses by the home control platform (col. 9, lines 45-64), and a central processing unit, operably coupled to the bus interface unit, that is configured to process input data from the bus interface unit, and is configured to provide processed data to the bus interface unit (fig. 2).

As per claim 26, Zou discloses the control processor of claim 25, further including a microkernel that is configured to provide base operating system services that include at least one of: semaphores, messaging, scheduling, exception management, task management, and memory management (col. 9, lines 5-67).

As per claim 27, Zou discloses the control processor of claim 26, further including an interface that is configured to couple the microkernel to a standard operating system (col. 12, lines 1 et seq.; fig. 3; fig. 8).

As per claim 28, Zou discloses the control processor of claim 26, wherein the task management is configured to provide direct access to at least one of a plurality of processing units, the at least one of the plurality of processing units being configured as a coprocessor, and the direct access being provided through a coprocessor interface layer (col. 8, lines 1-67).

As per claim 29, Zou discloses the control processor of claim 25, further including: an interface between the home control platform and at least one legacy consumer product, wherein the at least one legacy consumer product includes at least one of: a television, a telephone, an audio system, a video system, and an appliance (fig. 1A)

As per claim 30, Zou discloses the control processor of claim 25, further including at least one of: a voice recognition system, a voice synthesis system, and a wireless device interface system (e.g. CD system; fig. 1A).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 5-7, 20, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zou in view of Brotz et al. (USPN 6,374,404; Brotz).

As per claims 5-7 and 20, Zou discloses the invention as applied to claim 1 above. Zou does not explicitly disclose at least one processing unit includes: a filter unit, and a SDRAM and wherein the filter unit is configured to be programmable; and wherein each of the plurality of serial buses is configured to be self-timing.

Brotz, in the system of providing intelligent devices in a HAVI system, teach the use of an intelligent filter system (300) in a set-top-box (fig. 3) and a SDRAM (cache memory 102a) wherein the filter system 300 is programmable to filter web pages (col. 2, lines 60-67; col. 9, lines 5-14). Brotz further teaches the use of self-timing bus (col. 11, lines 60 et seq. to col. 12, lines 1-14).

It would have been obvious to one of ordinary skill in the home network system art at the time the invention was made to employ a programmable filtering system and memory in the

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HAVI system such as that of Zou as taught by Brotz. Brotz teaches that the a programmable filtering system and memory would allow users to cache the most frequently viewed web pages and would enable the system to update the user/viewer selections based on the behavior and viewing patterns/history of the user. With the provision of the cache memory 102e therefore increases the user's internet connectivity experience by eliminating any perceived latencies for selected web pages that are associated with a cache hit. (col. 10, lines 20-24).

As per claims 22-24, Zou discloses the claimed invention including a processing unit for use in a home control platform (e.g. figs. 1-2) comprising: a bus interface unit, processor and plurality of serial buses (1394; 30a-f). Zou does not disclose at least one processing unit includes: a filter unit, and a SDRAM and wherein the filter unit is configured to be programmable.

Brotz, in the system of providing intelligent devices in a HAVI system, teach the use of an intelligent filter system (300) in a set-top-box (fig. 3) and a SDRAM (cache memory 102a) wherein the filter system 300 is programmable to filter web pages (col. 2, lines 60-67; col. 9, lines 5-14). Brotz further teaches the use of self-timing bus (col. 11, lines 60 et seq. to col. 12, lines 1-14).

It would have been obvious to one of ordinary skill in the home network system art at the time the invention was made to employ a programmable filtering system and memory in the HAVI system such as that of Zou as taught by Brotz. Brotz teaches that the a programmable filtering system and memory would allow users to cache the most frequently viewed web pages and would enable the system to update the user/viewer selections based on the behavior and viewing patterns/history of the user. With the provision of the cache memory 102e therefore

increases the user's internet connectivity experience by eliminating any perceived latencies for selected web pages that are associated with a cache hit. (col. 10, lines 20-24).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached Form PTO-892.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XUAN M. THAI whose telephone number is 703-308-2064. The examiner can normally be reached on Monday to Friday from 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



XUAN M. THAI
Primary Examiner
Art Unit 2111